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Distribution extension and geographic distribution map of *Elachistocleis helianneae* (Anura: Microhylidae): new record for state of Amapá, Eastern Amazon

Carlos Eduardo Costa-Campos[1, 2*] and **Eliza Maria Xavier Freire**[3]

1 Universidade Federal do Amapá, Departamento de Ciências Biológicas e da Saúde, Laboratório de Herpetologia, Campus Marco Zero do Equador, Rod. Juscelino Kubitschek, km 02, Jardim Marco Zero, CEP 68.903-419, Macapá, AP, Brazil
2 Universidade Federal do Rio Grande do Norte, Programa de Pós-Graduação em Psicobiologia, Lagoa Nova, CEP 59.072-970, Natal, RN, Brazil
3 Universidade Federal do Rio Grande do Norte, Departamento de Botânica, Ecologia e Zoologia, Laboratório de Herpetologia, Lagoa Nova, CEP 59072-970, Natal, RN, Brazil
* Corresponding author. E-mail: eduardocampos@unifap.br

Abstract: We provide a record of *Elachistocleis helianneae* from the municipality of Macapá, the first from the state of Amapá, northern Brazil. This is also the species' most eastern occurrence and significantly extends the known distribution by 350 km from the closest previously known occurrence in the municipality of Belém, state of Pará; the new record is ca. 1,600 km from this species' type locality at Humaitá, state of Amazonas.

Key words: Eastern Amazon, Amapá, Amazon savanna, biogeography; Anura

The genus *Elachistocleis* Parker, 1927 currently comprises 17 species (Frost 2015), exclusive of *E. ovalis* (Schneider, 1799) is taxonomically problematic (Caramaschi 2010). The genus occurs in Central America and is widespread through South America, from Panama to Argentina, including Venezuela, Bolivia, Colombia, Guyana, Surinam, French Guiana, Paraguay, Uruguay, and Brazil (Nunes-de-Almeida and Toledo 2012; Frost 2015). All species of *Elachistocleis* present morphological (robust body, short legs and small eyes), ecological (fossoriality life and explosive breeding strategy), and behavioral (presence of a sustained high pitched advertisement call) similarities (Caramaschi 2010; Toledo 2010; Toledo et al. 2010; Nunes-de-Almeida and Toledo 2012).

Eleven species occur in Brazil: *Elachistocleis bicolor* (Valenciennes *in* Guérin-Menéville, 1838); *E. bumbameuboi* Carmaschi, 2010; *E. carvalhoi* Carmaschi, 2010; *E. cesarii* (Miranda Ribeiro (1920); *E. helianneae* Carmaschi, 2010; *E. erythrogaster* Kwet & Di-Bernardo, 1998; *E.*

Figure 1. *Elachistocleis helianneae* from municipality of Macapá, state of Amapá, Brazil: (**A**) dorsolateral and (**B**) ventral color pattern of a live adult specimen (male; SVL 27.2 mm) collected in May 2013 at Experimental Field of the Brazilian Agricultural Research Corporation/EMBRAPA, in Amazon savanna.

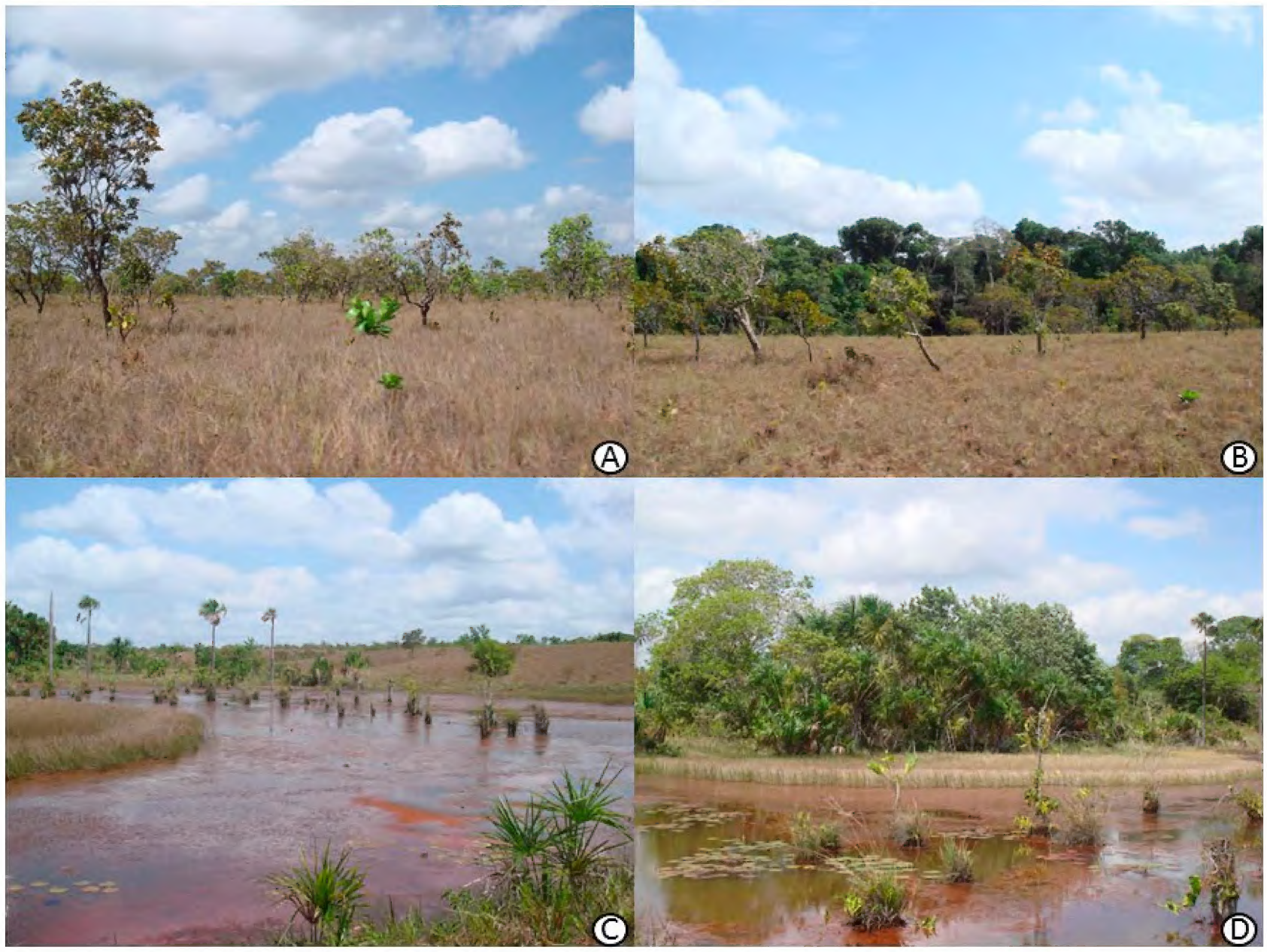

Figure 2. Breeding habitats of *Elachistocleis helianneae*: (**A**) scrub grassland savanna; (**B**) parkland savanna; (**C**) and (**D**) permanent ponds in Amazon savanna.

magnus Toledo, 2010; *E. matogrosso* Carmaschi, 2010; *E. muiraquitan* Nunes-de-Almeida & Toledo, 2012; *E. piauiensis* Caramaschi & Jim, 1983 and *E. surumu* Carmaschi, 2010. *Elachistocleis helianneae* differs from all other congenerics mainly by its small size (snout vent length 28.7 mm in males and 36.4 mm in females) and head length slightly smaller than the head width. All individuals present a post-commisural gland poorly developed, and grayish brown dorsum with minute light spots on dorsum and dorsal surfaces of members and ventral coloration immaculate cream (Figure 1). Also *E. helianneae* is different of the other species in the genus by the distinctive mid-dorsal longitudinal light cream stripe, from the tip of snout to vent and by the sharp color limit between the dorsal and ventral regions and by the stripe on the posterior surface of thighs broad, irregular (Caramaschi 2010).

In this work we report the first record of *Elachistocleis helianneae* for the state of Amapá, in northern Brazil, in a transitional region between the Amazon Savanna and the Amazonian forest phytophysiognomies. Three males of *E. helianneae* were collected at the municipality of Macapá, state of Amapá, in the Experimental Field of the Brazilian Agricultural Research Corporation/ EMBRAPA (00°23′05″ N, 051°02′02″ W; datum: WGS84), on 1 May 2013 at 19:37 h.

All collections were made during the rainy season (January to June), in a scrub grassland and parkland savanna. These areas are characterized by presenting herbaceous stratus in high density and the irregular presence of small trees (<4.3 m), forming a discontinuous canopy (Miranda et al. 2003; Figure 2).

Specimens were collected under license number 37907-1, issued by the Brazilian Ministry of Environment (MMA), Chico Mendes Institute for Biodiversity Conservation (ICMBio), Authorization System and Information on Biodiversity (SISBIO). The voucher specimens of *E. helianneae* were deposited in the Herpetological Collection of the Emilio Goeldi Paraense Museum (MPEG 37744) and Herpetological Collection of Universidade Federal do Amapá (CECCAMPOS 00122, 00227).

In Brazil, *E. helianneae* was reported to occur in the states of Amazonas, Pará and Rondônia (Turci and Bernarde 2008; Caramaschi 2010; Piatti et al. 2012). Besides the first state record, the occurrence of *E. helianneae* in the municipality of Macapá represents easternmost record for the species and extends its known distribution by 350 km from the closest previously known record in state of Pará (Figure 3). The new record is ca. 1,600 km from the species' type locality in the state of Amazonas (Humaitá; 07°35′ S, 062°40′ W, 90 m altitude).

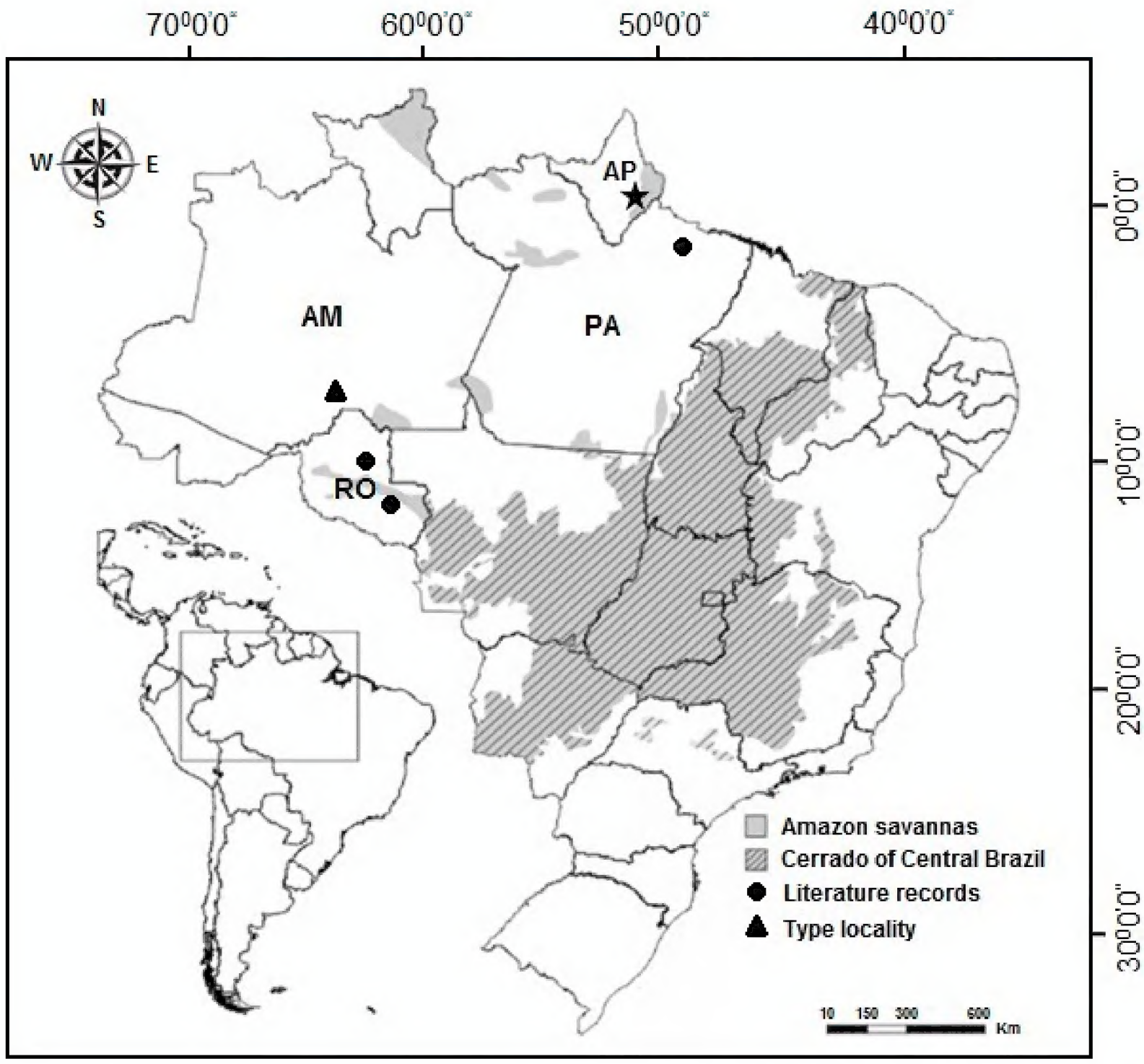

Figure 3. Known geographic distribution map of *Elachistocleis helianneae*. AM = Amazonas; RO = Rondônia; PA = Pará; AP = Amapá. Circles = localities cited in the literature data. Triangle = type locality. Star = new record in the municipality of Macapá, state of Amapá, Brazil.

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LITERATURE CITED

Caramaschi, U. 2010. Notes on the taxonomic status of *Elachistocleis ovalis* (Schneider, 1779) and description of five new species of *Elachistocleis* Parker, 1927 (Amphibia, Anura, Microhylidae). Boletim do Museu Nacional Nova Série Zoologia 527: 1–30. http://bionames.org/bionames-archive/issn/0080-312X/527/87604563-Elachistocleis-Bol-Mus-Nac-Zool-chi-2010.pdf

Frost, D.R. 2015. Amphibian species of the world: an online reference. Version 6.0. Accessed at http://research.amnh.org/vz/herpetology/amphibia, 21 April 2015.

Miranda, I.S., Absy, M.L., Rebêlo, G.H. 2003. Community structure of woody plants of Roraima Savannahs, Brazil. Plant Ecology 164(1): 109–123. doi: 10.1023/A:1021298328048

Nunes-de-Almeida, C.H. and Toledo, L.F. 2012. A new species of *Elachistocleis* Parker (Anura, Microhylidae) from the State of Acre, Northern Brazil. Zootaxa 3424: 43–50.

Piatti, L., Amaro, P.M.O., Araújo, J.F.J., Sanches, V.Q.A. & Bernarde, P.S. (2012). Anurans of a disturbed area in Jarú, Rondônia, Brazil. Check List 8(1): 83–87. http://www.checklist.org.br/getpdf?SL049-11

Toledo, L.F. 2010. A new species of *Elachistocleis* (Anura; Microhylidae) from the Brazilian Amazon. Zootaxa 2496: 63–68.

Toledo, L.F., Loebmann, D. and Haddad, C.F.B. 2010. Revalidation and redescription of *Elachistocleis cesarii* (Miranda-Ribeiro, 1920) (Anura: Microhylidae). Zootaxa 2418: 50–60. http://www.mapress.com/zootaxa/list/2010/2418.html

Turci, L.C.B. and Bernarde, P.S. 2008. Levantamento herpeto-faunístico em uma localidade no município de Cacoal, Rondônia, Brasil. Bioikos 22: 101–108.

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